

Prof. dr. Alexandru Moruzi`s life cues and opening lesson at the Faculty of Medicine of Iasi

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Abstract. Professor Dr. Alexandru Moruzi lived in the first half of the XX century. Born in an aristocratic family, he studied in Paris where he graduated from both high school and the Faculty of Medicine. It was also in Paris that Moruzi worked as a young doctor and specialised in general surgery and neurosurgery, a domain that just then was being born as an independent field. He was trained in Dr. Maurice Robineau`s service and in Professor Thierry de Martel`s surgery clinic, two outstanding French medical personalities of the time. In October 1929, Dr. Moruzi returned to Bucharest, where he completed his military service and enrolled as a *reserve medical officer lieutenant*. In 1930 he was a secondary surgeon in the Third Surgical Clinic of the Coltea Hospital in Bucharest, directed by the great surgeon, Prof. Dr. Amza Jianu, a pioneering Romanian neurosurgeon. One year later, in 1931, Moruzi started his brilliant career in Iasi, when he was appointed senior [*primar*] doctor in the Surgery Service of the "Caritatea" [Charity] Hospital. A complex medical personality, he systematically opened new fields of surgical activity and teaching, in keeping with the latest advances of Western European medicine. Due to his qualities and expertise, Prof. Dr. Leon Ballif, director of the "Socola" Hospital of Nervous and Mental Diseases in Iasi, decided to set up a separate pavilion for neurosurgical interventions in 1933, and Moruzi was appointed coordinator of this *first Neurosurgery Service* ever established in Romania. Little by little, similarly to his masters, De Martel and Robineau, Moruzi enabled neurosurgery to gain the status of an autonomous branch of surgery in his country, too. An assistant professor since 1935, he was promoted full professor of the Faculty of Medicine of Iasi, in 1938. He became professor of External Pathology and Surgery and Orthopedic, as well as professor of Surgery Clinic and Diseases of the Urinary Tract. During World War II he assisted the wounded with great devotion. This article outlines several aspects of Professor Moruzi`s professional life and points out the main ideas of his inaugural lecture, given in November 1938. Not only outstanding medical personalities and their work were sketched, but concepts, trends, tendencies and debates were pointed out, reflecting the complex surgery metamorphoses of those days. *Alexandru Moruzi lived in a revolutionary era of surgery and he took part in the important modernisation of medical teaching and practice in Iasi.* Until now, his lecture illustrates a substantial and personally experienced lesson of history of medicine.

Keywords: Alexandru Moruzi, neurosurgery, Iasi, inaugural lesson, medical history



Biographical landmarks. Prof. Dr. Alexandru Moruzi (1900-1957) came from a princely family of Greek descent, whose origin was in Trebizond. Several representatives of it migrated to the

Romanian Lands and some of them were ruling princes of both Moldavia and

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Wallachia in the 18th-19th centuries. Dr. Alexandru Moruzi was born in Bucharest on February 18, 1900, to this old aristocratic family. (Fig.1) His father was General George Moruzi and his mother, Alexandrina (Adina), born Stirbei (Stirbey). (1)

From 1910 to 1930 he lived almost uninterruptedly in Paris. It was there that he graduated from the “Janson de Sailly” High School in 1918. One year later, in 1919, he received a certificate -*certificat d'études physiques, chimiques et naturelles (PCN)*- attesting that he studied Physics, Chemistry and Natural Sciences at the University of Paris. (1,2,3) This diploma was required as a preliminary preparation for the future students in medicine. He then attended the Faculty of Medicine in Paris and became a doctor in medicine in 1929, with a thesis on orthopedic prostheses and biocompatibility: “Synthèse et prothèse osseuses. Étude clinique et radiologique de la tolérance du tissu osseux”. (1,4).

Although he had a modest life as a student, he excelled in competitions for medical externships and internships of the Hospitals of Paris. The young Moruzi worked as a medical intern in Dr. Maurice Robineau's service from 1927-1928, and in 1929 in Professor Thierry de Martel's surgery clinic. A prominent personality of French neurosurgery, Jean François Marie Thierry de Martel (1875-1940) was the first French doctor to create a neurosurgery service in a small Clinic of Obstetrics – “Vercingétorix” Clinic- located on 219, Vercingétorix Street in Paris and directed by Dr. Camille Landais. De Martel had an impressive experience in war neurosurgery he accumulated during World War I.(Fig.2, Fig.3)

On October 10, 1929, Dr. Moruzi returned to Romania, where he completed his military service and enrolled in the II Sanitary Company in Bucharest as a reserve

medical officer lieutenant. (1,3) Concurrently, in 1930 he was a secondary surgeon in the Third Surgical Clinic of the Coltea Hospital in Bucharest, directed by the great Romanian surgeon, Prof. Dr. Amza Jianu. Jianu himself functioned both in Bucharest and Iasi and performed neurosurgical interventions. Due to his concerns about neurosurgery, he was even considered a pioneering Romanian neurosurgeon. Amza Jianu imagined an original decompressive craniectomy procedure in 1910 and, for the first time in Iași, he successfully performed excision of ponto-cerebellar tumors. Apart from Alexandru Moruzi, he promoted in this specialty Dr. Dumitru Bagdasar and Dr. Dem O. Vasiliu.



Fig. 2. Maurice Robineau

(<https://www.biusante.parisdescartes.fr/histoire/images/>)

On October 1, 1931, Dr. Alexandru Moruzi was appointed senior [*primar*] doctor in the Surgery Service of the “Caritatea” [*Charity*] Hospital in Iași. The same year he married the Swiss Suzanne-Pauline Marie de Weck. A complex medical personality, he systematically opened new fields of surgical activity and teaching, mainly a series of

chapters on the pathology of the nervous system, in keeping with the latest advances of Western European medicine.



Fig. 3. Thierry de Martel

1933 - The first neurosurgery clinic in Romania. In 1933, Prof. Dr. Leon Ballif, director of the “Socola” Hospital of Nervous and Mental Diseases in Iasi, decided to set up a separate pavilion for neurosurgical interventions. It was Alexandru Moruzi who took over the management of this first Neurosurgery Service ever established in Romania. (Fig.4.a, b,c) Dr. Moise Ferdman, a honorary surgery specialist of the “Socola” Hospital for Nervous and Mental Diseases, worked in this new service, assisting Dr. Moruzi. (5)

Various specialised services – radiology or histology – supported the young clinic. In Professor Paul Anghel’s Surgery Clinic, at the “St. Spiridon” Hospital, radiographs were performed by Dr. Gatoschi, whereas in Professor Alexandru Tupa’s Laboratory of the Histology Department micrographs were achieved. As an invited specialist, Dr. Moruzi operated in Professor

Ion Tanasescu’s Surgery Clinic, in that of Professor Anghel and in the “Izolarea” (*Isolation*) Hospital Surgery Service.

This priority is meaningful for outlining the prestige the Iasi School of Medicine enjoyed in the interwar decennia. Nevertheless, its merit was challenged by forceful arguments produced by Professor Dr. Dumitru Bagdasar’s successors. Eventually, based on a complex archival documentation, this priority was officially recognized during the International Congress of Neurosurgery organised by the Romanian Society of Neurosurgery at Mamaia - Romania, in 1992. Dr. Hortensiu Aldea, Professor of Neurosurgery of the “Grigore T. Popa” University of Medicine and Pharmacy in Iasi, was directly involved in proving, supporting and disseminating convincing evidence concerning Dr. Alexandru Moruzi’s first neurosurgery service in Romania.(6,7) Similarly to his masters, Thierry de Martell and Maurice Robineau, Moruzi enabled neurosurgery to gain the status of an autonomous branch of surgery.

On January 1, 1935, Dr. A. Moruzi was appointed temporary assistant professor for a five-year period, at the Clinic of Nervous Diseases of the Faculty of Medicine. (8) The dean of the Faculty was Professor Dr. Stefan Graçoschi, whereas the rector of the whole University of Iasi was Prof. Dr. Traian Bratu. Moruzi succeeded Dr. Maria Briese in this position. It was in 1935 that he was nominated neurosurgeon of the Municipal Hospital in Sibiu. (1) However, by the end of 1935, Moruzi participated in a contest for the position of senior [primar] surgeon and chief of the Neurosurgery Clinic of the Central Hospital in Bucharest. Along with Dr. Dumitru Bagdasar, specialised in Harvey Cushing’s Clinic, due to a Rockefeller fellowship, Dr. Moruzi got the maximum score, but having a longer experience, Dr.

Bagdasar was preferred by the Competition Commission. (7)



Fig.4. a. Prof. Moruzi and Prof. Ballif in 1933 (7,8)



Fig.4. b. Iasi. Socola Hospital.
The Neurosurgery Pavilion (7,8)



Fig.4. c. Prof. Dr. A. Moruzi in 1940 (10)

Consequently, Moruzi returned to Iasi, where, in 1938, was promoted full professor.

In Iasi, Professor Moruzi's home was in the vicinity of a historical building – the “Cantacuzino-Pascanu” Hospital: 4, Pascanu Street. (2) In the meantime, he continued his prodigious activity. Alexandru Moruzi had an impeccable surgical technique, being an adept of gentle gestures, respectful of anatomical structures and manifesting particular care for perfect hemostasis. He operated slowly and attentively in order to avoid operative trauma and its consequences. All this professional, didactic and scientific activity enshrined him as the creator of the modern school of neurosurgery in Iași – Romania.

Moruzi operated every day practicing general surgery and neurosurgery, the latter accounting for 20-25% of the overall activity of the Clinic. According to Dr. Emil N. Lupu, one of his coworkers, the statistics of the service between October 1934 and January 1941 were suggestive: on 5879 hospitalised patients, 2621 major surgeries were performed, out of which 329 neurosurgical interventions (46 laminectomies, out of which 25 for bone marrow tumors, 101 cranial trepanations out of which 50 for cerebral expansive processes and 8 interventions for peripheral nerve damage. (5,7)

On December 23, 1937, he was entrusted with the management of the hospital, as its director. (1)

As already mentioned, in 1938, Dr. Moruzi was appointed full professor of Surgery of the Faculty of Medicine of the Iasi University. He delivered his courses on a regular basis, initially in the lecture hall (Amphitheater) of the Romanian Railways Pavilion belonging to the “Caritatea” Hospital, and, after World War II, in the lecture hall (Amphitheater) of the Institute of Anatomy of the Faculty of Medicine. He also included in his talks more delicate topics such as: intracranial hypertension syndrome,

spinal cord compression syndrome, traumatic shock. (5,7,8)

During World War II, Professor Moruzi was deeply involved in treating wounded soldiers and civilians, with great skill and dedication. In 1941, the “Caritatea” Hospital was transformed into the “Internal Area” War Hospital - Number 286, dedicated to cranio-cerebral pathology. Realizing that the treatment of war cranio-cerebral wounds must be performed urgently in the very vicinity of the front, he requested and obtained the creation of a special medical unit with doctors from Iași, to ensure the neurosurgical assistance of the wounded in optimal conditions and in due time. Thus Captain Prof. Dr. Al. Moruzi created a volunteer team he started to coordinate himself within the Moto Hospital 6 of the Red Cross. The operating group was active just behind the battlefield and included Dr. Emil N. Lupu, Dr. Octav Troianescu, Dr. Petre Branzei, Dr. Stefan Petrescu. (7, 9) (Fig.5, Fig. 6, Fig.8)



Fig.5. Picture from the front: in the middle, Captain Prof. Dr. Al. Moruzi, commander of the Moto Hospital 6 of the Red Cross, between second lieutenant Dr. Octav Troianescu, on the left, and Dr. Emil N. Lupu, on the right. (9)

Under the same dramatic historical circumstances, Professor Dr. Dumitru Bagdasar and his collaborators submitted a memorandum by which they convinced the

military authorities that they would be more useful at the Bucharest Military Hospital. (6)



Fig.6. Iasi. Prof. Moruzi in front of the “Caritatea” Hospital. From left to right: Dr. Vsevolod Urbanovici, Dr. Emil N. Lupu, Prof. Alexandru Moruzi, Dr. Octav Troianescu, Dr. Ion Alexandrescu (7)



Fig. 7. Iasi. Dr. Alexandru Moruzi and his collaborators at the “Caritatea” Hospital (9)

Professor Moruzi instead assisted the wounded even on the Don River front, where a historic and bloody defeat of the Romanian soldiers occurred. In 1943, together with his coworkers, he took the risk of being taken prisoner, refusing to abandon a patient on the operating table. (7)

Between 1945 and 1947, Moruzi continued his medical activity in the historical capital of Moldavia.

On January 1, 1942 he was hired as permanent physician of the Urology Clinic of the “St. Spiridon” Central Hospital of Iasi and went on as full professor of the Department of Surgery Clinic and Diseases of the Urinary Tract of the Faculty of Medicine. (1,3)

In Iasi, Dr. Moruzi published in the *Bulletin de la Société Roumaine de Neurologie, Psychiatrie, Psychologie et Endocrinologie (BNPPE)*, the periodical of the Romanian Society of Neurology, Psychiatry, Psychology and Endocrinology, he was an active member of. (2,5,6) In 1918, this Society was founded in Iasi at the “Socola” Hospital by the well-known neurologist, forerunner of international endocrinology and gerontology, Professor Dr. Constantin I. Parhon. At the Society of Neurology, Psychiatry, Psychology, Endocrinology and Forensic Medicine, with Prof. Ballif, Dr. Moruzi presented important scientific communications such as those on the [Parathyroid Adenoma] or [Cerebral abscesses].

He also published in the *Medical-Surgical Journal of the Society of Physicians and Naturalists of Iasi*. Moruzi was a member of the editorial committee of this publication, along with Professors Ion Nicolau, Gheorghe Tudoranu, Oscar Franche and Vasile Mârza. He was equally elected President of the Society of Physicians and Naturalists of Iasi in 1940-1941.

Alexandru Moruzi, Professor of the *Surgical Therapeutic Clinic*, closely collaborated with the reputed internist and cardiologist of Iasi, Prof. Dr. Ion Enescu, professor of the *Medical Therapeutic Clinic*, coauthoring a book on “The Medical-Surgical Therapeutics of the Circulatory Apparatus”, proving his mind openness for

an interdisciplinary approach in medicine. (Fig.8)

Besides, Professor Moruzi was a member of both the *French Surgery Association* and of the *International Society of Surgeons*.

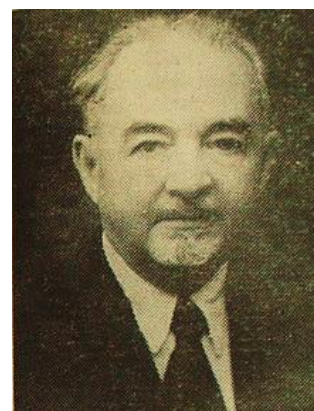


Fig. 8. I. Enescu, Al. Moruzi. Book Cover: *The Medical-Surgical Therapeutic of the Circulatory Apparatus*, Iasi: Alexandru A. Terek Printing House, 1947

His scientific publications were numerous and interesting, indeed. (10-36)

Turmoil of life after World War II. In his contemporaneity, Prof. Al. Moruzi was a personality of the medical and social life of the city of Iasi. For his merits, he was decorated with the French “Medal of Epidemics” and with the “Crown of Romania”, in the rank of knight. (3) The socio-political events that occurred in Romania after the Second World War determined Professor Al. Moruzi, descendant of a princely family, to leave his country on May 19th, 1947, immediately after the instauration of the communist regime. Moruzi managed to escape flying with a Swedish Red Cross plane to Istanbul, Turkey – and then to Switzerland, where his wife and two children – George and Alexandra (Sanda) – were already waiting for him. In 1948 he settled with his family in Venezuela, at Merida. The same year, Moruzi was appointed Professor of Surgical Therapeutics and Director of the Department of Experimental Surgery of the University of the Andes (Universidad de Los Andes). Since April 1949, he worked as head of the Department of Gynecological Surgery of the city of Andes. On September 10, 1950, he arrived in the United States of America where he obtained residency only on May 7, 1954. He worked in two American Hospitals, one of them being the American Railways Hospital, and performed exclusively general surgery.

He participated in several congresses and conferences. Alexandru Moruzi died from pulmonary embolism in Kansas City (Missouri), on May 3, 1957. (1,7)

A blink into the history of surgery and neurosurgery

Professor Moruzi's inaugural lecture. By the High Royal Decree No. 2,566/1938, on August 1, Mr. Alexandru Moruzi was appointed full professor at the Department of

External Pathology and Surgery and Orthopedic Clinic of the Faculty of Medicine of the Iasi University (Order of the Ministry of National Education, No.114.031/1938).(2,3) He replaced in this position Prof. Dr. Alexandru Cosacescu (1888-1951). Revisited today, Professor Moruzi's inaugural lecture illustrates a real lesson of history of medicine. Not only outstanding medical personalities and their work were sketched, but concepts, trends, tendencies and debates were pointed out, reflecting the complex surgery metamorphoses of those days.

Thanks, and greetings. Prof. Dr. Alexandru Moruzi held his opening lecture on November 26, 1938. (26) After thanking the rector in office of the University, the famous surgeon Prof. Dr. Ioan Tanasescu, the dean to be elected, Professor Dr. Grigore T. Popa, and the academic staff, he greeted the whole audience. He expressed his gratitude for having been so kindly accepted at the Faculty of Medicine of the University of Iasi from the very beginning when the destiny of this institution was decided by the former rector, Prof. Dr. Traian Bratu, a reputed Germanist, and the former dean, Professor Dr. Stefan Graçoschi (Graçoski), a well-known pediatrician: “It is a pleasant duty for a new teacher to thank his predecessors who did him the honor of entrusting him with a position in the midst of these personalities. Unexpected and abnormal circumstances, however, put me in a strange position: my gratitude and respectful feelings are first directed to people who no longer hold their former post today. Professor Bratu was leading the destinies of the Michaelian University when I was called to a chair of surgery at the Faculty of Medicine in Iasi. I will never forget the kindness you have shown me, and, please, Professor, keep full confidence in the soundness of my feelings of gratitude. Professor Graçoski, the former

dean of our Faculty, has suddenly left this position and the chair. He was among the first to wish to collaborate with me, a newcomer to Iasi. He trusted me at a time when no one knew my abilities. This attitude cannot be forgotten, and all the expressions of kindness which he later showed me have further strengthened my devotion.

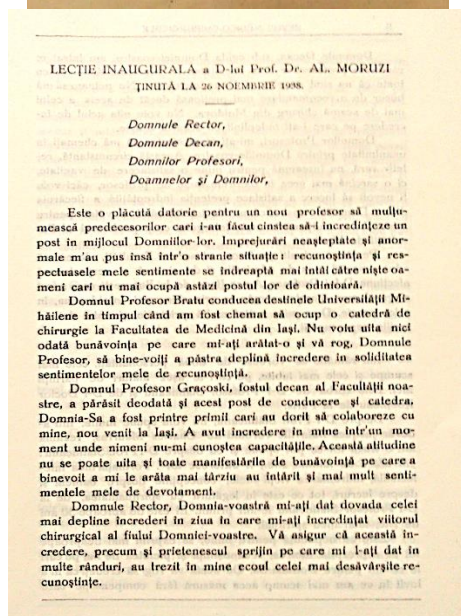
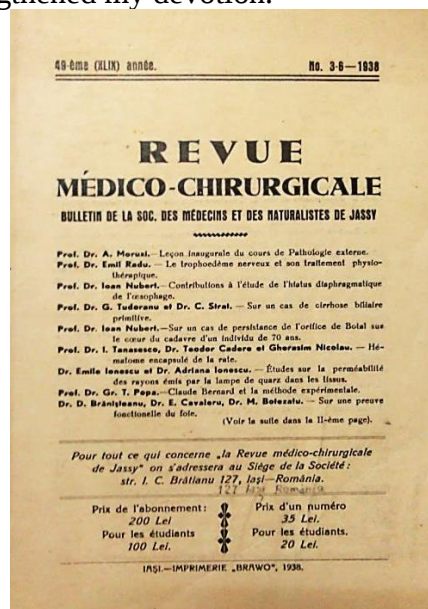


Fig.8.a. Cover of “The Medical-Surgical Journal” where Professor Moruzi’s Inaugural Lecture was published: 1938, XLIX, nr. 3-6 ; b. first page of the Lecture.

Mr. Rector, you have given me the fullest confidence the day you entrusted me with the surgical future of your son-in-law. I assure you that this confidence, as well as the friendly support you have given me many times, has aroused in me the most perfect gratitude.

Mr. Dean, under your auspices, I have joined the professors of the Faculty of Medicine in Iasi, all of whom are students of yours. I could not enjoy a more valuable recommendation than that of the most important surgeon in Moldova. I will not forget the act of trust that you fulfilled on this occasion.

Professors, I have been honored to be unanimously called among you. This relatively rare circumstance does not mean to me a satisfaction of vanity, but a heavier burden in my duties as a teacher, for I will have to try to satisfy the just claim of each of you that he was not mistaken when he voted for me. I would like to thank the entire Faculty of Medicine in Iasi.”

Masters and role models. Moruzi continued his speech by outlining the importance of his masters, human and professional models. In addition to the current professors of this Faculty, I would like to pay tribute and express my admiration and sincere and respectful affection to Professor Amza-Jianu from Bucharest, who was my only Romanian master in the art of surgery. Always, on every occasion, he showed me great friendship and gave me unwavering support.

Professor Dr. Moruzi’s lecture went on by remembering his Masters, the Romanian bacteriologist, Professor Alexandru Slatineanu (1873-1939), and the French surgeon, Professor Maurice Robineau (1870-1950), surgeon of the Hospitals (1902), Honorary of Necker

Hospital (1933), director of the Amphitheater of Hospitals and member of the French Academy of Surgery: “All I have to do is talk about two personalities, the most precious and the most beloved, whom I place with my parents. These are Professor Slătineanu¹ and Dr. *Maurice Robineau* from Paris.”

The homage to Professor Slatineanu came first: “I will not say much about Prof. Slatineanu. Indeed, Jacques Bainville², speaking of Charles Maurras³, sums up in one sentence everything I can say about Prof. Slătineanu: «apart from the light of day, I owe him everything», my intellectual formation, my life's guidance, my conceptions about people and things, everything related to spirituality I received from Professor Slatineanu; he has been my spiritual father for almost 30 years.

It is impossible for me to express more closely all that is the love, gratitude, and piety of the son that I feel for him. That is why I ask you to believe that I was shocked by the most expensive measure without compensation which made him leave the Faculty the very moment I entered the didactic staff of this Faculty.

It is not the case, in an inaugural lesson, to show, even briefly, the vast, fruitful and varied activity of Professor Slatineanu. However, I want to take advantage of the presence of a large and selected audience to remind you that along with Professor Cantacuzino, Professor Slatineanu saved the country on two occasions in exactly the same way that the soldiers saved it on the battlefields. These

are the cholera epidemic of 1913 and the typhoid fever of 1917. If it were only these two works, the whole Romanian country would still have to keep an endless gratitude to Professor Slatineanu. I wanted these facts to resonate, even if only through my unqualified voice, within the walls of this University.”

The Homage to Professor Robineau, a pioneer in French neurosurgery, followed: “I know many foreign surgeons, especially French ones. None of them had the overwhelming influence that Dr. Robineau had. He is the incomparable master who made me the surgeon of today. With a stern, uncommunicative look, Dr. Robineau is the gentlest, most delicate soul, and the most prepared teacher to love his students as a parent. I was fortunate enough to form a close friendship with the other two internal colleagues in Dr. Robineau's service, and all three of us were literally adopted by our dear boss.

When I arrived as an intern in Dr. Robineau's service after nearly 10 years of medical education, from the beginning I and my friends were very impressed with the concept of surgery in that service. In fact, Dr. Robineau rarely did more than 2 or 3 interventions in a surgical session. These were almost always very important interventions and very often they were interventions based on completely original biological and surgical concepts. It was impressive to see the serenity, the calm courage, the tenacity and at the same time the freedom of spirit with which Dr. Robineau performed the most formidable

¹ Professor Alexandru Slatineanu (1873-1939) was a Romanian bacteriologist, close collaborator in Bucharest of the illustrious microbiologist, Prof. Dr. Ion Cantacuzino; later he was appointed head of the Bacteriology Department of the Faculty of Medicine of Iasi.

² *Jacques Bainville* was a French journalist, historian

and academician.

³ *Charles-Marie-Photius Maurras* was a French author, politician, poet, and critic; an organizer and principal philosopher of the “Action Française” (far-right nationalist and royalist school of thought and political movement) of the XX century.

surgical interventions. At the same time a first-rate anatomist, he proceeded with impeccable technique. Dr. Robineau's surgical spirit is quite different from the usual one, and I am convinced that it is the spirit that will animate tomorrow's surgery."

Robineau's tomorrow's surgery. Extended surgical therapies. In the first half of the 20th century, new horizons opened up in surgery, such as neurosurgery, surgery of the endocrine glands, heart, cancers etc. Besides, internal pathologies began to benefit more and more from surgical therapies. As Professor Moruzi pointed out: "The subject of this inaugural lesson is directly inspired by Dr. Robineau's personality. I would like to share with you today the evolution that is taking place at this moment in surgery. This evolution is driven by an urgent need, namely: surgery is increasingly attacking organs, regions or diseases that until now were areas forbidden to the surgeon. This progressive penetration of surgery in areas considered to be purely medical to this day is due to several factors. Thus, although new therapies have been born in recent decades, among which we can cite radiotherapy as the most important one, along with all the advances in hygiene and all the new contributions of chemistry, endocrinology, etc., still medical therapy remains disarmed in the face of a prodigious number of diseases. That's why internists are increasingly asking the surgeon to test the resources of his art for these conditions. Bouchard⁴, who was a doctor and not a surgeon, said about 40 years ago that the real doctor of tomorrow will be the surgeon and that diseases tend

to become surgical. Leaving aside the exaggeration contained in this butade, we must recognize that the field of surgery is spreading more and more, invading territories once considered purely medical. Among the most impressive achievements of surgery today are endocrine surgery, cerebrospinal surgery, lung surgery. But the boldness of modern medical concepts went further, and Egas Moniz described and practiced — it seems with some encouraging results — a fine-tuned intervention on the brain: leukotomy, designed to cure some purely mental illnesses.

In addition to this desire to cure incurable diseases, a major factor is involved in the progressive expansion of the pathological territory of surgery. It is a change in the pathology itself. Some diseases disappear or change their appearance. Thus, the chlorosis disappeared, so did the lobar frank, acute pneumonia, so frequent and typical of the past, which became much rarer and less typical in its appearance today. Other diseases appear to be relatively recent, such as lethargic encephalitis.

In fact, today's very improved hygiene contributes to changing the pathology. I said a few minutes earlier that advance in hygiene do not prevent the expansion of the field of surgery. I had to say that due to the progress of hygiene, this field is spreading more and more. Indeed, thanks to improved hygiene, the average age of life has risen in civilized countries. Fewer people die of infectious diseases in their youth: they will later suffer from more common diseases at an older age, including cancer. This partly explains why cancer is becoming more

⁴ Charles Jacques Bouchard (1837-1915) – well known French pathologist.

common and cancer remains a largely surgical condition today. In addition to cancer, stomach ulcers, some heart diseases, some biliary disorders, many trophic and degenerative diseases or disorders, and so many others, are the prerogative of an older age and surgery attacks these conditions more and more favorably.

In addition to these reasons for the development of surgery, there is also the fact that new surgical disciplines have been created or perfected since the war, giving surgery greater possibilities. This is the great lung surgery that is practiced in England and America.

Finally, what has been called physiological surgery provides the therapist with new weapons through which he can modify a pathological nervous or endocrine balance. Thus, the ablation of a parathyroid can alter the metabolism of calcium, the total thyroidectomy can improve some decompensated heart diseases, the stelectomy can sometimes cure angina pectoris etc.

All these facts have brought a formal denial to those who believed and strongly asserted that the advances of our bio-humoral and physiological knowledge, that physics, chemistry, and the other sciences applicable in biology will reduce surgery almost completely to emergency surgery. On the contrary, we see the opposite evolution: more and more the doctor demands, more the intervention of the surgeon in once purely medical fields is efficient, because only surgery can bring in many cases the physiological act of healing.

From all these considerations, the following consequence results: the surgical act becomes more and more daring but at the same time and more and

more fine and delicate. Ablation of the adrenal gland for permanent hypertension is a very demonstrative example of surgery performed in a region that was not previously considered surgical, a very difficult surgical procedure due to the depth of the region and of the importance of the organs encountered, and which, however, must be practiced with a particular gentleness and finesse of gestures, given the tenderness of these organs as well as of the adrenal gland itself. At the same time, the surgeon has to deal with patients who are often of particular fragility, such as those who suffer from surgical angina pectoris.” Consequently, surgery profile would radically change in the future, greatly improved by antisepsis, asepsis and anesthesia and paralleled by ever more sophisticated and adapted specific instruments: “As a result, the old surgical discipline, which had reached a climax of perfection, can no longer satisfy us today in all cases. It had reached, at the time of the war, a very perfected state of material technicality. Thanks to anesthesia, thanks to asepsis, thanks to a precise knowledge of surgical anatomy, an era was closing in which surgery had expanded its field especially through the incessant birth of new techniques. However, this technical tool has become insufficient for the purpose.”

Progress in modern surgery

The post-operative disease.

Another aspect Moruzi emphasized in his lecture on the history of modern surgery was the “*operation trauma*”, the “*humoral syndrome*” and the “*post-operative disease*”, a problem Robineau himself was concerned with, insisting on its treatment. From this viewpoint there is a limit surgeons should thoroughly observe. This was the case of Halsted, Wertheim, but

Toma Ionescu, too: "Continuing on this path, the surgery had to hit and hit a limit, especially since the doctors demanded more of it, because no matter how great the practitioner's skill, it is a limit to the operation trauma - a limit that the surgeon cannot cross without seeing the operative mortality rising to unacceptable percentages.

The history of cancer operations is typical. After the Halsted or Wertheim-type interventions were conceived, some daredevils tried to move on. Thus, surgical techniques for the ablation of breast cancer have been studied by an enlarged Halsted that allowed the simultaneous ablation of the cervical lymph nodes, until the severity of these operations imposed the conclusion that in the collarbone there is a limit that should not be exceeded. Similarly, Toma Ionescu, widening uterine cancer ablation intervention, also exerted the lumbar ganglia. But immediately the operative mortality became excessive and the example was not followed.

Curiously, it was not until around 1928 that the physiology of operative trauma began to be studied more closely. These aspects are included in the name of post-operative disease. An attempt was therefore made to reduce the risk of operative trauma in two ways - on the one hand by a closer understanding of the postoperative disease and its rational therapy, on the other hand by the development of less traumatic surgical disciplines. Through this double struggle, new possibilities for tomorrow's surgery will be born.

Let's take a closer look. There are many obstacles that can be raised against the healing of our operated patients. I want to analyze only one of them here. The symptoms of postoperative disease have

long been known. We have known for a long time those operated on, tired, suffering, with a general malaise but without too precise characters. They have a slightly higher temperature than normal; the pulse is weaker and faster. Their skin is yellow, their eyes are slightly clogged with black circles.

This post-operative appearance is sometimes almost apparent, sometimes very pronounced. Sometimes the postoperative illness is serious and can lead to the death of the operated person. Postoperative shock, a comprehensible reaction after a trauma, the surgical world once said.

Today we know that this manifestation of our operations corresponds to a characteristic humoral syndrome, namely a blood chloropenia. To this chloropenia a higher percentage of urea than before the operation is added, often a true uremia. Likewise, the percentage of non-protein nitrogen is abnormally high. I do not insist on the other humoral symptoms.

Many of the postoperative complications, once considered to be organ damage, such as intestinal obstructions, peritonitis syndromes, bronchopulmonary or nervous complications, uremia etc. in reality they are often nothing more than a deceptive mask worn by post-operative disease.

The humoral syndrome of the post-operative disease can be intertwined with other humoral manifestations, among which the most important are acidosis and hypoglycemic shock.

Without going into the bio-humoral details of the postoperative disease, I want to insist that Dr. Robineau is the first to fix the therapy of this disease. He and Max Lévy said that vigorous chlorination of the body repels polypeptidemia and uremia to their normal limits. Following the experiments of

Robineau and Lévy, hypertonic chlorinated serum was introduced into the treatment of postoperative consequences in general and not only for intestinal obstructions as was done in America following the work of W.G. MacCallum in 1920 and R. L. Haden and T.G. Orr and others, and in Europe following the work of Antonin Gosset and Léon Binet in 1928.

This schematic sketch of the postoperative disease must be completed. There is a crucial notion to understand the impact of this disease on the future of surgery, namely: post-operative disease is not due to anesthesia. Of course, the first idea of the researchers was to accuse the toxic effect of anesthetic substances, especially since liver, kidney, myocardial lesions, disorders of the acid-base balance etc., were sometimes found. However, this hypothesis was erroneous following the research of Allen Oldfather Whipple, Gheorghe Crăiniceanu, Arnaud and Florian, the main argument being that the humoral syndrome of post-operative disease cannot be created by simple anesthesia, in the absence of operative trauma.

Postoperative disease is almost exclusively due to operative trauma. It releases a number of toxic substances, which are normally contained in various tissues: muscles, liver, kidneys, intestines. These substances contain especially non-protein nitrogen, according to the treatment shown by Duval and Grigaut, and these toxins invade the body causing post-operative toxicosis.

The post-operative disease is not in parallel with the importance of the traumatic surgery. It is very likely, as Félix Legueu, Léon Ambard and Henry Chabannier have shown, that it is also related to the type of traumatized tissues, some of which release more toxins than others. Muscles, in particular, appear to have an important toxic

action. In addition, it seems that more or less characterized infectious phenomena also occur. This explains why the most common appendectomy is likely to cause a post-operative illness that can sometimes be serious. However, tissue trauma remains the primary factor in the onset of the postoperative disease.

Chlorination of the body is therefore not the therapeutic cure for postoperative disease. There is another treatment, prophylactic, which consists of reducing the operative trauma to the minimum possible. During the operation, the operator will take special care not to crush, tear, compress or stretch the tissues excessively. In other words, the vitality of the tissues must always be respected as much as possible. At this point in my communication, we come to a contradiction. Indeed, as we have seen, surgical therapy is becoming more and more daring, while, at the same time, the post-operative illness requires us to reduce the trauma of surgery to the minimum possible. The only solution to get out of this vicious circle is to create less invasive techniques that, in their details, operate in a non-traumatic way when practiced, so that the whole intervention remains within the limits of the trauma that is bearable for the body. This is the key to resolving the contradiction that may open up new possibilities for surgery in the future.

This modification of the technique, modern surgery is about to make. In fact, this change means

a lot more than just changing a manual discipline. The spirit in which the manual technique is applied changes even more. Even in the last century, Sedillot said that success in surgery belongs to the most careful, not the brightest. In America, Halstead had created a surgical school famous for its quality care."

The stimulating role of neurosurgery.

"I do not want to describe the procedures by

which pure surgical technique can be performed with the least traumatic surgery. Instead, I would like to point out that in this improvement of technique modern neurosurgery has had a special influence. Not enough yet! I am convinced that more and more techniques, which today are particular to neurosurgery, will be used tomorrow in all surgical specialties. And thanks to this new technique, tomorrow's surgery will be able to meet the new requirements.

From this point of view, I consider that I have a particular duty to fulfill in terms of the education of surgery in Iasi and I would like to thank with a special friendship Mr. Professor Ballif, who gave me the opportunity to fulfill it. By creating the neurosurgery service at Socola, he did not bring only possibilities of care to a particular category of patients, but he also allowed the implantation in Iasi of a new discipline, which is called to play a leading role in the evolution of surgery.

This new surgery, like nerve surgery, must be precise, meticulous, and extremely gentle. Such surgery can only be slow.

Let us really remember what happened when Fedor Krause tried, some 50 years ago, to remove brain tumors. «The operated patients died - says Krause, even though I operated on them extremely quickly. » Horsley and Cushing later taught us that Krause's patients had died because he had not operated on them slowly. As for the accuracy required, I ask your permission to tell you a very typical little anecdote that happened to me when I arrived as a medical intern in Dr. Robineau's service. The next day we were to perform a retrogasserian rhizotomy. Trying to find out the technique he intended to use, I asked at what distance the root behind the ganglion should be sectioned, and Dr. Robineau replied with a kind of indignation, probably

motivated by our ignorance: "oh, very far, at least 2 mm from the edge of the ganglion." In fact, Robineau pioneered trigeminal retrogasserian neurotomy.

Anesthesia and surgeons' mentality.

"Surgery requires a new study of anesthesia, as the anesthetic should be less toxic the longer the operation lasts. Hence, in fact, the phenomenon we are witnessing, right now, the continuous birth of new anesthetic products and new techniques for administering anesthetics. We see how close to the centenary of the discovery of anesthesia, it is called to play a new role in the development of surgery.

We would be making a gross mistake to believe that these seemingly purely material changes in surgical habits have no bearing on the mentality of surgeons. I rightly insist that the new precise and meticulous, and therefore slow, surgery is only possible through a profound change in the psychology of surgeons. Today, where this evolution is about to take place, it is difficult for us, the contemporaries, to see this evolution very clearly. However, by reviewing the history of surgery in the last century, seen from the point of view of the surgeon's moral and intellectual attitude, this evolution will be easier to highlight.

Embracing the history of surgery from the beginning of the last century to the present day, several stages in surgery can be described, each of which is characterized by a type of surgeon representative of the time.

In the pre-anesthetic period, the surgeon could only accomplish his terrible mission thanks to his speed he was working with. The surgery was simplistic and mutilating. The surgeon, a robust, firm, dexterous man, insensitive to the patient's atrocious suffering, was certainly devoid of any operative delicacy. Think of Baron Larrey dislocating his thigh in less than two minutes on the Napoleonic battlefields. The

discovery of anesthesia allows the surgeon to be more painstaking, but the lack of asepsis prevents the development of surgery. However, the operating techniques are beginning to improve. The surgeon is no longer a fearless mutilator. The man armed with a moralism capable of withstanding the ferocious scenes of the previous age, and with a physique capable of withstanding the patients terrorised by torment, begins in this age to work in a constructive spirit.”

Antisepsis and asepsis. “With Pasteur and Lister, however, the glorious era of surgery begins. In a few decades, it has reached one of the pinnacles of human success in the fight against disease and death. What is the surgeon's mindset right now?

Asepsis allows him to enter any region of the body. The anatomy is surgically restored. The surgeon, thanks to these two weapons, becomes extremely daring. The technique dominates. The surgeon is first and foremost an operator. He believes that a good technique and a lot of skill are the keys to success. Most surgeons aspire to be brilliant operators. Execution speed is a sign of technical superiority.

It is the age when a famous surgeon writes «Surgeons leave passionate laboratory research to physicians and devote themselves to more exciting work in the operating room.» It is the age when surgery is, in the etymological sense of the word, the work of the hands. Strange aberration! Surgery is not purely manual, nor is a painting or a statue a purely manual work.”

Surgery and aesthetics. “Carrel wrote: «Aesthetics is an inexhaustible source of joy for those who know how to find it. For it is everywhere. It springs from the hands that shape or paint the rough tile, that cut the wood and turn it into furniture, that weave the silk, that carve the marble, that splits and

repairs the human body. It is in the bloody art of great surgeons as it is in the art of painters, musicians and poets. »

What Carrel writes about aesthetics can be repeated, at least in the same way about brain effort. And it exists in the bloody harp of the great surgeons as it is in the art of painters, musicians, poets.

Major surgery requires brain training, a clear mindset, common sense, and a sense of finesse that helps make today's surgeon a complete human specimen in the full sense of the word. Indeed, the surgeon must be a man capable of high intellectual conception, of superior morality, and animated by a courageous sense of responsibility. But at the same time, he must have a manual dexterity and physical endurance that will double the scientist with a high-quality performer. The truly complete practitioner is at once a scholar, a brave man, and a director.”

Surgery and physiology. “In the pre-war period, the surgeon was too often devoid of the scientist's scientific curiosity and research spirit. It was fatal for the drunken age of pure selfishness and speed to reach its limit. At the same time, because the fast and brilliant surgery in progress cannot be as meticulous and sparing as the slow one, a change in the whole temperament of the surgeons had to happen little by little.

At the same time, the idea that any operation is equivalent to an experience of physiology has been progressively implanted, as Leriche says. Physiology has become of more and more interest for surgeons and in post-war surgery, a good surgeon can no longer be just a good technician doubled by a good anatomist.

He is becoming more and more of a physiologist. He does physiological surgery, but he also knows the physiology of surgery. At the same time, the modern surgeon is increasingly interested in «exciting laboratory work. » At the same time, the

surgical technique has become more complex. Tenacious morale and a perfect psychic mastery make the modern surgeon a more complex type of man and far removed from the pre-anesthetic surgeon. A good surgeon today would have been a very bad surgeon back then, just as the surgical temperament of yore could not be reconciled with today's surgical technique."

The surgical insight into life. "But there is another point of view, of a higher significance, in the progressive changes of the surgical technique. Surgery, as it develops, brings us more and more knowledge about the organisation of human life. It brings it to us because more and more surgeons know better how to extract the physiological education contained in each intervention, because more and more they resort to laboratory control.

But more fruitful in this respect is the enterprise, which modern surgery has succeeded in, by penetrating areas of the pathology that are completely new to it. This success of surgery required the development of new research techniques. We can cite, for example, arteriography, myelography, encephalography. The introduction of these new research techniques has revealed many notions of normal and pathological physiology, which we sometimes did not even suspect before. As a result, surgeons undertook the therapy of these unknown, incompletely known, or misinterpreted pathological conditions. Seeing the facts live, many mistakes have been corrected, many new things have been learned.

Thus, our knowledge of physiology on the skeletal system, on the mechanism of blood circulation and on cardiovascular physiology, the capital notions brought by surgeons on digestive, endocrine etc. functions, are due in large part, and for some of them almost exclusively, to

ultra-modern surgery. However, the most impressive scientific contribution of surgery remains in the field of the central nervous system. Here more than anywhere, any intervention is equivalent to a physiological experience. That is why neuro-surgery has written a vast chapter of definitive importance in our neuro-psychiatric knowledge and it is the discipline that was probably the most fruitful in this branch of our knowledge of ourselves in the last quarter of a century.

If we were to consider surgery in the strictest sense, it would be only a particular therapeutic method. And if it were only from this point of view, it would still have benefited mankind. I appeal to all those who have been saved from death or suffering by surgery. But surgery is so much more, as I have tried to show you, being one of the most fruitful disciplines for the knowledge of man. It thus rises to the level of a method of general knowledge."

Even though not mentioned in his inaugural lecture, Professor Moruzi was interested in better identifying the right time for surgical interventions, whenever possible: "l'heure chirurgicale". (17) This was a topic often discussed in that time by brilliant surgeons, such as *Henry Delagénère*, or in *doctoral theses*. (37, 38)

Undoubtedly, as clearly stated in his inaugural lecture, Alexandru Moruzi lived in a revolutionary era of surgery and he was part of the important modernization introduced in medicine in Iasi.

The conclusion of this synthetic presentation can't be other but Professor Moruzi's closing words, revealing his deep meditation on medicine acting upon the human body, soul and mind, and trying to understand and respect the human spiritual condition:

"Ladies and gentlemen,

I would be grateful if, through this lecture, I could at least recover from the epic splendor of surgery. It is the greatest example of the success of a human enterprise: the fight against disease, against death, and at the same time an extraordinary means of knowing ourselves.

This success should not, however, make us confident, for the phrase of the French philosopher Blaise Pascal remains true even for tomorrow: «Man is for himself the most wonderful object of Nature, for he cannot conceive what the body is, much less what the soul is, and, still less than anything else, how a body can be one with a soul. It is the height of difficulties and yet it is his own being. »”

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